

CITY OF GROVES
JEFFERSON COUNTY, TEXAS
WATER CONSERVATION PLAN

Prepared By:

SPI  **SCHAUMBURG & POLK, INC.**

8865 College Street, Beaumont, Texas 77707
(409) 866-0341 phone (409) 866-0337 fax

June 2019

TABLE OF CONTENTS

	<u>PAGE</u>
I. <u>INTRODUCTION</u>	
A. Planning Area	1
B. Needs for and Goals of the Program	3
Exhibit 1 – Service Area.....	2
II. <u>WATER CONSERVATION PLAN</u>	
A. Utility Profile	4
B. Five & Ten Year Goals	4
C. Schedule	6
D. Tracking & Implementation.....	6
E. Implementation & Enforcement	7
III. <u>DROUGHT CONTINGENCY PLAN</u>	
A. Declaration of Policy, Purpose and Intent	8
B. Public Involvement.....	8
C. Public Education.....	8
D. Coordination with Regional Water Planning Groups.....	9
E. Coordination with Lower Neches Valley Authority.....	9
F. Authorization	9
G. Application	9
H. Definitions	9
I. Criteria for Initiation and Termination of Drought Response Stages.....	10
J. Drought Response Stages	12
K. Enforcement.....	15
L. Variances	16
APPENDIX:	
A. Regulation and Guidelines Pertaining to Water Conservation Plan 30 TAC Chapter 288 (on-line) TWDB Form 1968 City Ordinance 2006 -03 - Water Conservation Plan City Ordinance 2006-04 – Drought Contingency Plan East Texas Regional Water Planning Group	
B. Utility Profile Texas Water Development Board Form 1965-R	
C. Water Conservation Plan 5- and 10 year goals (TWDB-1964)	

I. INTRODUCTION

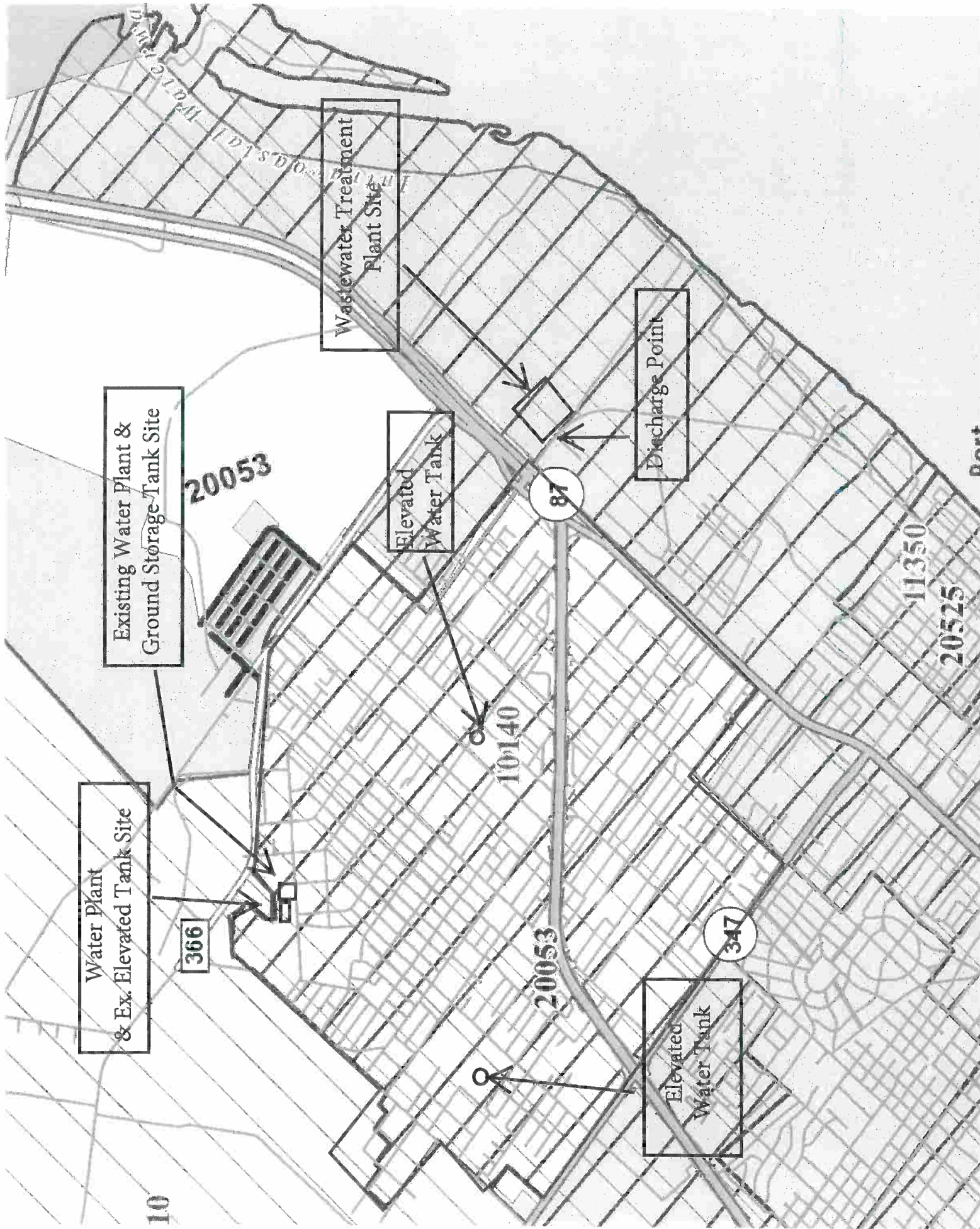
A. PLANNING AREA

Groves is located in Jefferson County in Southeast Texas in the Beaumont-Port Arthur metropolitan statistical area (Exhibit 1). Groves is the southernmost of three cities known collectively as the Midcounty area and is located just northeast of Port Arthur near the eastern corner of the county. The City comes within approximately 1½ miles of Sabine Lake and within a similar distance of the Neches River.

The population of the City is 16,144 according to the 2010 census. The Texas Water Development Board has projected an unchanged population through 2060. The City is predominantly residential, interspersed with various commercial, school, recreational, and minimal vacant areas. There is only a limited potential for growth, since the City is surrounded by the cities of Port Arthur and Port Neches and has little vacant land.

The City provides water and sewer service for all residents within the City, as well as various commercial and light industrial customers. Agriculture in the Groves area is almost nonexistent. There are no separate meters used for agricultural purposes. The City has a surface water plant at its north corner near an LNVA canal. The City obtains all of its raw water from the canal system operated by the Lower Neches River Authority. The City's wastewater plant is located within Port Arthur, southeast of the City. Wastewater from the City's plant is discharged into the Sabine-Neches Canal, a segment of the Intracoastal Waterway.

This Water Conservation Plan will apply to the entire City plus any out-of-City water service. In the event that any areas outside the City receive wholesale water or sewer service in the future, such areas would become subject to provisions of the program as required by the TCEQ and/or the TWDB. Alternately, these areas would be covered by water conservation programs adopted by their retail water providers.



Water Plant
& Ex. Elevated Tank Site

Existing Water Plant &
Ground Storage Tank Site

Wastewater Treatment
Plant Site

Elevated
Water Tank

Discharge Point

Elevated
Water Tank

366

20053

10140

20053

87

347

11350

20525

10

Dart

B. NEED FOR AND GOALS OF THE PROGRAM

The City has an existing Water Conservation Plan, adopted in 2006. The existing plan was adopted in conjunction with a Texas Water Development Board Clean Water State Revolving Fund Loan for improvements to the wastewater treatment system. The original requirement for the Water Conservation Program is contained in House Bill No. 2 and House Joint Resolution No. 6, 69th Texas Legislature, 1985. The most recent requirement for Water Conservation and Drought Contingency Plans are outlined in 30TAC Chapter 288, effective December 6, 2012. Reference to the latest version of the administrative code is available online. The Plans are also a requirement for any entity seeking loans through the Texas Water Development Board (TWDB) that are in excess of \$500,000. The TWDB maintains a checklist, TWDB 1968, of items to be included in the Plans (Appendix A).

The two main divisions of the program are water conservation plan and a drought contingency plan. The purpose of the water conservation plan is to develop strategies to reduce withdrawal from a supply source, reduce loss or waste of water, improve the efficiency of use of water, increase recycle and reuse and prevent pollution. The drought contingency plan's objective is to identify strategies for temporary supply and demand management in response to water supply shortages and emergencies. The existing plans include several elements required by the current guidelines. Elements not included in the existing plan include the Water Conservation Utility Profile, setting of 5 year and 10 year conservation goals and tracking implementation of the goals.

The potential savings of water through water conservation measures in the Southeast Texas area, in comparison to other regions of the State, would be expected to be below average. Jefferson County receives one of the highest amounts of annual rainfall in the State and therefore outdoor watering is not as prevalent as in arid areas. In addition, groundwater and surface water supplies in the East Texas Region, are for the most part, abundant in quantities. The need for water conservation measures will be largely dependent on the Lower Neches Valley Authority and impacts on its ability to maintain sufficient water supply for its customers

The need for water conservation should be monitored to future changing conditions. The drought in 2010 and 2011 resulted in a ten percent increase in water demand for the City of Groves usage. Statewide water planning could also impact the availability of water in the East Texas Region as water supply in other regions of the State become critical. In some areas of East Texas, the increased use of surface water supply could become more prevalent due to localized areas of groundwater shortages and more stringent drinking water regulations. The water conservation program is expected to become more effective in the future if water should become scarce or more expensive. By the time the need arises, local residents will have become better educated in regard to water conservation, and the necessary control mechanisms will already be in place.

II. WATER CONSERVATION PLAN

A. UTILITY PROFILE

The evaluation of the success of a water conservation plan requires comparison of data between time periods. The data used for comparison must be consistent in derivation. A Utility Profile is required to be submitted as a part of the water conservation plan and provides a basis for the collection of data. Appendix B includes a copy of the completed profile, TWDB Form No. 1965-R.

B. FIVE- AND TEN-YEAR GOALS

The current gallon per capita usage (gpcd), excluding the drought of 2010 and 2011 is on the order of 107 gpcd. This is a reduction from 120 gpcd reported in the 2014 Water Conservation Plan. Based on a review of the 2014 Regional Water Plan the water conservation goals are on the order of 2 gallons per capita per day (gpcd).

The guidelines for a Water Conservation Plan require an entity to set five and ten year goals for water conservation. The goals, which are non-enforceable, must be in a measurable form such as gpcd usage. Setting of the goals should be based on identifying water conservation strategies that the community can successfully implement and assigning an anticipated water savings value to the strategy. The Texas Water Development Board maintains Best Management Practices (BMP) guidance documents. The document at the time of the Plan is entitled "Best Management Practices for Municipal Water Users", published by the Texas Water Development Board in November 2013. It should be noted that Texas Water Code Section 16.0121(b) requires retail public water utilities to conduct a water audit every five years. Strategies that are practical for implementation in the City of Groves include the following:

- System Water Audit and Water Loss
- Leak Control
- Metering
- Water Conservation Pricing
- Public Outreach (School Education/Public Information)
-

The City of Groves 5 and 10 year goal is to reduce water loss by 1 gpcd and 2 gpcd respectively, from the current 6 gpcd baseline. The values along with the 5 and 10 year goals for total and residential water consumption are available in Appendix C. The majority of the savings would be through practices associated with reduction of water loss. A more detail description of the practices is in the BMP referenced above and is available online at <https://www.twdb.texas.gov/conservation/BMPs/Mun/doc/MunMiniGuide.pdf>. The following table provides a summary of the gpcd impact each of the above strategies will have on water savings. The system audit is expected to be the best tool in achieving

and monitoring water conservation. The City of Groves has been utilizing educational practice, and should continue to do so, although it would not be expected to have any additional impact except under drought conditions.

Public Outreach (School Education/ Public Information)

A detailed description of the methods used for public outreach can be found in Section 7-3 of the City of Groves Drought Contingency Plan.

Water Rate Structures

Municipalities have the ability to self-govern and change rates via ordinance adoption in regard to establishing service regulations. A Home-rule City can set water and sewer rates by official action of its City Council. The City of Groves may also be obligated by the terms of TWDB loan agreements (for existing water facilities) to meet certain requirements for its rate structure.

Existing Water Rates

(1) Within City limits

2,000 gallons or less, minimum.... \$11.00

2.001 or more gallons per 1,000...3.45

(2) Outside city limits

The rate shall be one and a half (1 ½) than the city rates

Metering

High service is the only total metering method used for the distribution of water for the City of Groves.

Leak Detection and Repair

The City of Groves discovers leaks in the distribution system by two methods:

- The Water Storage Facilities are equipped with an alarm system that notifies via phone calls that a decrease in pressure is appearing in the system.
- Leaking line results in water appearing on ground surface.

All breaks on main transmission lines and/or minor line repairs are performed by City personnel using whatever adapters are necessary for similar or dissimilar materials. In the event that leakage results from slippage of fittings, the utility can replace existing fittings with mechanical joint fittings. Repairs are performed in accordance with Rules and

Regulations for Public Water Systems, 30 TAC 290.46 (g), Texas Commission on Environmental Quality, including disinfection.

Much of the unaccounted-for water is used for Owner facilities, line flushing, and fire department usage (including hydrant testing and firefighting).

Water and Wastewater Manager prepares monthly internal reports including total water produced and total sales. The City of Groves submits monthly reports to the TCEQ covering total water pumpage, number of active water services, treated water quality, disinfectant usage, and water quality violations (if any).

Annual System Audit

The City Manager will be responsible for managing the overall implementation of the water conservation strategies. The measure of the effectiveness of the program will be evaluated based on comparative data developed from the Water System Audit and updating of the Utility Profile. An annual review will be made with all members who have authority for the various water conservation strategies. The review will include evaluation of the effectiveness of the existing strategy and identify new strategies that can be implemented.

C. SCHEDULE

The City has already implemented the practices and would continue to improve on the tracking of information for the system audit and implement such action based on the obtained information.

D. TRACKING IMPLEMENTATION AND EFFECTIVENESS

The ability to meet the goals of the plan requires periodic review of the status of the implementation and evaluation of effectiveness by comparison of the measures for the established goal. 30TAC Chapter 288 requires that all Water Conservation Plans be reviewed and updated every five years thereafter to coincide with regional water planning group cycles. Items to be addressed in the review should include the following:

- changes in water supply and/or demand which require more stringent implementation of the program
- changes in state regulations
- coordination with regional water planning effort.

This water conservation plan, and subsequent amendments, is required to be filed with the East Texas Regional Water Planning Group.

Annual reports are required to be filed for utilities that have an active financial obligation

with the Texas Water Development Board, have more than 3,300 connections or that have water rights through Texas Commission on Environmental Quality. The reports are due May 1 of each year. The BMP's adopted for this Water Conservation Plan are the same as previously outlined and included the following. The current format for reporting the results of the review is provided in Appendix C.

E. IMPLEMENTATION AND ENFORCEMENT

The implementation of the plan is effective by adoption of an ordinance. A copy of the effective ordinance is included in Appendix A. The authority for implementation and enforcement of the water conservation measures will vary by the type of strategy implemented.

Any future contracts for the City to supply water or sewer service to outside entities will contain provisions requiring the entities to adopt water conservation plans, or alternatively provisions imposing applicable requirements of the City's water conservation plan on those entities. Such contracts will also include provisions to pass similar requirements along to any lower tier wholesale customers as part of the next new, amended, or renewed contract.

Similar provisions for the Drought Contingency Plan will apply to any direct or lower tier wholesale water or sewer customers.

In addition, this Water Conservation Plan, and any amendments thereto is to be submitted to the East Texas Regional Water Planning Group. A copy of the correspondence and information related to the East Texas Regional Water Planning Group is provided in Appendix A.

Chapter 7 - DROUGHT CONTINGENCY PLAN

Sec. 7-1. - Declaration of policy, purpose and intent.

In order to conserve the available water supply and protect the integrity of water supply facilities, with particular regard for domestic water use, sanitation, and fire protection, and to protect and preserve public health, welfare, and safety and minimize the adverse impacts of water supply shortage or other water supply emergency conditions, the city hereby adopts the following regulations and restrictions on the delivery and consumption of water through ordinance passed by the city council. Water uses regulated or prohibited under this drought contingency plan (the plan) are considered to be non-essential and continuation of such uses during times of water shortage or other emergency water supply condition are deemed to constitute a waste of water which subjects the offender(s) to penalties as defined in section 7-9 of this plan.

(Ord. No. 06-04, §§ 1, 2, 1-23-06)

Sec. 7-2. - Public involvement.

The city shall actively inform the public and wholesale water customers and affirmatively provide opportunity for input from the public and from wholesale water customers regarding the plan. Such provision includes, but is not limited to, notifying the public and wholesale water customers of the city's public meeting regarding the proposed plan, notice of which will be given pursuant to the Open Meetings Act.

(Ord. No. 06-04, §§ 1, 2, 1-23-06)

Sec. 7-3. - Public education.

The city will periodically provide the public with information about the plan, including information about the conditions under which each stage of the plan is to be initiated or terminated and the drought response measures to be implemented in each stage. This information will be provided by means of:

- (1) Publications of articles in a newspaper or newsletter of general circulation in the service area, providing information regarding the plan and/or information regarding water conservation techniques;
- (2) Direct distributions to all residents and other users of water within the city, and all wholesale water customers of the city, if any, ("users") explaining the plan;
- (3) Direct distributions to users of educational and informational material regarding the plan; and
- (4) Additional educational activities consisting of:
 - a. Conducting an informational school program in a school attended by students within the city's service area;
 - b. Conducting an educational program for users at a public place within or accessible to residents of the city;
 - c. Conducting or engaging in such other informational or educational activity designed to further the plan as may be consistent with the purposes and policies of this plan; or
 - d. Any combination of the foregoing.

(Ord. No. 06-04, §§ 1, 2, 1-23-06)

Sec. 7-4. - Coordination with regional water planning groups.

The service area of the city is located within East Texas Regional (Region I) Water Planning Group and the city has provided a copy of this plan to the East Texas Regional Water Planning Group.

(Ord. No. 06-04, §§ 1, 2, 1-23-06)

Sec. 7-5. - Coordination with Lower Neches Valley Authority.

All water for the city is supplied through a municipal raw water contract with the Lower Neches Valley Authority (LNVA). LNVA has implemented its own drought contingency plan that includes water use restrictions that are applicable to its retail and wholesale customers. The LNVA's drought plan requires its wholesale customers to enforce similar or more stringent standards and procedures in their water systems. A copy of the LNVA drought contingency plan is [available for inspection in the offices of the city].

(Ord. No. 06-04, §§ 1, 2, 1-23-06)

Sec. 7-6. - Authorization.

The city's designee authorized and directed to implement the applicable provisions of this plan is as named in the ordinance approving the plan. The city's designee has the authority to determine when implementation is necessary to protect public health, safety, and welfare. The city's designee shall have the authority to initiate or terminate drought or other water supply emergency response measures as described in this plan.

(Ord. No. 06-04, §§ 1, 2, 1-23-06)

Sec. 7-7. - Application.

The provisions of this plan shall apply to all persons and customers utilizing water provided by the city. The terms "person" and "customer" as used in the plan include individuals, corporations, partnerships, associations, and all other legal entities.

(Ord. No. 06-04, §§ 1, 2, 1-23-06)

Sec. 7-8. - Definitions.

For the purposes of this plan, the following definitions shall apply:

- (1) *Aesthetic water use*: Water use for ornamental or decorative purposes such as fountains, reflecting pools, and water gardens.
- (2) *Commercial and institutional water use*: Water use that is integral to the operations of commercial and non-profit establishments and governmental entities such as retail establishments, hotels and motels, restaurants, and office buildings.
- (3) *Conservation*: Those practices, techniques, and technologies that reduce the consumption of water, reduce the loss or waste of water, improve the efficiency in the use of water or increase the recycling and reuse of water so that a supply is conserved and made available for future or alternative uses.
- (4) *Construction water use*: Water used in the process of building or erecting structures, streets, ditches, etc. or water used to prepare a surface for building and/or rehabilitation. Construction water use may occur through a fixed tap or through a mobile unit that fills at a fixed tap.
- (5) *Customer*: Any person, company, or organization using water supplied by the city.
- (6) *Domestic water use*: Water use for personal needs or for household or sanitary purposes such as drinking, bathing, heating, cooking, sanitation, or for cleaning a residence, business, industry, or institution.

- (7) *Even number address:* street addresses, box numbers, or rural postal route numbers ending in 0, 2, 4, 6, or 8 and without addresses.
- (8) *Industrial water use:* The use of water in processes designed to convert materials of lower value into forms having greater usability and value.
- (9) *In-service production capacity:* The production capacity of the treatment plant taking into account temporary loss in capacity due to removal of treatment units/equipment for non-scheduled repairs or maintenance or modifications in treatment operation due to changes in surface water quality.
- (10) *Landscape irrigation use:* Water used for the irrigation and maintenance of landscaped areas, whether publicly or privately owned, including residential and commercial lawns, gardens, golf courses, parks, and rights-of-way and medians.
- (11) *Non-essential water use:* Water uses that are not essential nor required for the protection of public health, safety, and welfare, including:
 - a. Irrigation of landscape areas, including parks, athletic fields, and golf courses, except otherwise provided under this plan;
 - b. Use of water to wash any motor vehicle, motorbike, boat, trailer, airplane or other vehicle;
 - c. Use of water to wash down any sidewalks, walkways, driveways, parking lots, tennis courts, or other hard-surfaced areas;
 - d. Use of water to wash down buildings or structures for purposes other than immediate fire protection;
 - e. Flushing gutters or permitting water to run or accumulate in any gutter or street;
 - f. Use of water to fill, refill, or add to any indoor or outdoor swimming pools or jacuzzi-type pools;
 - g. Use of water in a fountain or pond for aesthetic or scenic purposes except where necessary to support aquatic life;
 - h. Failure to repair a controllable leak(s) within a reasonable period after having been given notice directing the repair of such leak(s); and
 - i. Use of water from hydrants for construction purposes or any other purposes other than fire fighting.
- (12) *Odd numbered address:* Street addresses, box numbers, or rural postal route numbers ending in 1, 3, 5, 7, or 9.

(Ord. No. 06-04, §§ 1, 2, 1-23-06)

Sec. 7-9. - Criteria for initiation and termination of drought response stages.

- (a) The city's designee shall monitor water supply and/or demand conditions and shall determine when conditions warrant initiation or termination of each stage of the plan, that is, when the specified "triggers" are reached. The trigger conditions are for the purpose of responding to, but not limited to, the following situations:
 - (1) Reduction in available water supply from the LNVA;
 - (2) Water production or distribution system limitations;
 - (3) Supply source contamination; or
 - (4) Water system outage due to the failure or damage of major water system components (i.e. pumps, tanks, etc.).
- (b) *Stage 1 triggers—Mild water shortage conditions.*
 - (1) *Requirements for initiation.* Stage 1 may be initiated if one (1) or more of the following occur:
 - a. When, pursuant to requirements specified in the city raw water contract with Lower Neches Valley Authority, notification is received requesting initiation of stage 1 of the LNVA drought contingency plan.
 - b. When demand on the city's water supply facilities reaches or exceeds eighty (80) percent of the in-service

- production capacity of such facilities for three (3) consecutive days, as determined by the city's operator.
- c. Level in storage tanks are consistently below three-fourths ($\frac{3}{4}$) full for five (5) consecutive days.
 - d. Disruption in supply facilities (LNVA canal conditions, transmission line from canal) result in the city's reservoir being depleted to two-thirds ($\frac{2}{3}$) normal operating conditions.
- (2) *Requirements for termination.* Stage 1 of the plan may be rescinded when all of the conditions listed as triggering events have ceased to exist for a period of three (3) consecutive days.
- (c) *Stage 2 triggers—Moderate water shortage conditions.*
- (1) *Requirements for initiation.* Stage 2 may be initiated when one (1) or more of the following occur:
 - a. When, pursuant to requirements specified in the city raw water contract with Lower Neches Valley Authority, notification is received requesting initiation of stage 2 of the LNVA drought contingency plan.
 - b. When demand on the city's water supply facilities reaches or exceeds eighty-five (85) percent of the in-service production capacity of such facilities for three (3) consecutive days, as determined by the city's operator.
 - c. Level in storage tanks is consistently below one-half ($\frac{1}{2}$) full for three (3) consecutive days.
 - d. Disruption in supply facilities (LNVA canal conditions, transmission line from canal) result in the city's reservoir being depleted to one-half ($\frac{1}{2}$) normal operating conditions.
 - (2) *Requirements for termination.* Stage 2 of the plan may be rescinded when all of the conditions listed as triggering events have ceased to exist for a period of three (3) consecutive days. Upon termination of stage 2, stage 1 becomes operative.
- (d) *Stage 3 triggers—Severe water shortage conditions.*
- (1) *Requirements for initiation.* Stage 3 may be initiated when one (1) or more of the following occur:
 - a. When, pursuant to requirements specified in the city raw water contract with Lower Neches Valley Authority, notification is received requesting initiation of stage 3 of the LNVA drought contingency plan.
 - b. When demand on the city's water supply facilities exceeds ninety (90) percent of the in-service production capacity of such facilities for three (3) consecutive days, as determined by the city's operator.
 - c. Level in storage tanks is one-quarter ($\frac{1}{4}$) full.
 - d. Disruption in supply facilities (LNVA canal conditions, transmission line from canal) result in the city's reservoir being depleted to one-quarter ($\frac{1}{4}$) normal operating conditions.
 - (2) *Requirements for termination.* Stage 3 of the plan may be rescinded when all of the conditions listed as triggering events have ceased to exist for a period of three (3) consecutive days. Upon termination of stage 3, stage 2 becomes operative.
- (e) *Stage 4 triggers—Critical water shortage conditions.*
- (1) *Requirements for initiation.* Customers shall be required to comply with the requirements and restrictions on certain non-essential water uses for stage 4 of this plan when one (1) or more of the following occur:

When demand on the city's water supply facilities reaches or exceeds ninety-five (95) percent of the in-service production capacity of such facilities for three (3) consecutive days, as determined by the city's operator.
 - (2) *Requirements for termination.* Stage 4 of the plan may be rescinded when all of the conditions listed as triggering events have ceased to exist for a period of three (3) consecutive days. Upon termination of stage 4, stage 3 becomes operative.
- (f) *Stage 5 triggers—Emergency water shortage conditions.*
- (1) *Requirements for initiation.* Customers shall be required to comply with the requirements and restrictions for stage 5 of this plan when the city's designee determines that a water supply emergency exists based on:

- a. Notification is provided by LNVA to the city that they have encountered a major system failure which may cause unprecedented loss of capability to provide water service;
- b. Major disruption in the city's treatment and/or distribution system causing an unprecedented loss of capability to provide water service; or
- c. Natural or man-made contamination of the water supply source.

(2) *Requirements for termination.* Stage 5 of the plan may be rescinded when all of the conditions listed as triggering events have ceased.

(Ord. No. 06-04, §§ 1, 2, 1-23-06)

Sec. 7-10. - Drought response stages.

(a) The city's designee shall declare stage conditions, as set forth in Section I of this plan, and implement the appropriate response. The city's designee, on all stages, shall implement the following notification procedures:

- (1) *Notification of the public:* The city's designee shall notify the public by means of any combination of the following:
 - a. Dissemination of press releases to the local news media (a list of public media information is [available for inspection in the offices of the city]);
 - b. Direct mail to each customer;
 - c. Public service announcements;
 - d. Signs posted in public places;
 - e. Posting of signs at the entrances to the city; and/or
 - f. Telephone calls.

Notices issued shall contain (i) the date the drought response measures will begin, (ii) the date the drought response measures will terminate, if known, (iii) a list of drought response measures to be implemented, and (iv) an explanation of penalties for violations of such drought response measures. Notices shall also be issued when actions for each stage has been terminated.

(2) *Additional notification:* The city's designee shall notify directly, or cause to be notified directly, the following individuals and entities:

- a. City manager, mayor and city council members (all conditions);
- b. City fire chief (severe, critical and/or emergency);
- c. City attorney (moderate, severe, critical and/or emergency);
- d. County emergency management coordinator (critical and/or emergency);
- e. County commissioner (critical and/or emergency);
- f. Critical water users (critical and/or emergency);
- g. Major water users (critical and/or emergency);
- h. TCEQ (required for: moderate, severe, critical, emergency);

(b) *Stage 1 response—Mild water shortage conditions.*

Target: Achieve a voluntary five (5) percent reduction in total water use.

- (1) *Best management practices for supply management:* The following measures will be implemented directly by the city to manage limited water supplies and/or reduce water demand: reduce or discontinue flushing of water mains, careful monitoring of system to prevent tank overflows and/or quickly repair line breaks/leaks.
- (2) *Voluntary water use restrictions for reducing demand:*

- a. Water customers are requested to voluntarily limit the irrigation of landscaped areas to Sundays and Thursdays with a street address ending in an even number (0, 2, 4, 6 or 8), and Saturdays and Wednesdays for water customers with a street address ending in an odd number (1, 3, 5, 7 or 9), and to irrigate landscapes only between the hours of midnight and 8:00 p.m. to midnight on designated watering days.
- b. All operations of the city shall adhere to water use restrictions prescribed for stage 2 of the plan.
- c. Water customers are requested to practice water conservation and to minimize or discontinue water use for non-essential purposes.
- d. Establish an information center to answer inquiries and to discuss water shortage and its potential impact on water supply.

(c) *Stage 2 response—Moderate water shortage conditions.*

Target: Achieve a ten (10) percent reduction in total water use.

- (1) *Best management practices for supply management:* The following measures will be implemented directly by the city to manage limited water supplies and/or reduce water demand: reduce or discontinue flushing of water mains, careful monitoring of system to prevent tank overflows and quickly repair line breaks/leaks.
- (2) *Water use restrictions for demand reduction:* Under threat of penalty for violation, the following water use restrictions shall apply to all persons:
 - a. Irrigation of landscaped areas with hose-end sprinklers or automatic irrigation systems shall be limited to Sundays and Thursdays for customers with a street address ending in an even number (0, 2, 4, 6 or 8), and Saturdays and Wednesdays for water customers with a street address ending in an odd number (1, 3, 5, 7 or 9), and irrigation of landscaped areas is further limited to the hours of 12:00 midnight until 10:00 a.m. and between 8:00 p.m. and 12:00 midnight on designated watering days. However, irrigation of landscaped areas is permitted at anytime if it is by means of a hand-held hose, a faucet filled bucket or watering can of five (5) gallons or less, or drip irrigation system.
 - b. Use of water to wash any motor vehicle, motorbike, boat, trailer, airplane or other vehicle is prohibited except on designated watering days between the hours of 12:00 midnight and 10:00 a.m. and between 8:00 p.m. and 12:00 midnight. Such washing, when allowed, shall be done with a hand-held bucket or a hand-held hose equipped with a positive shutoff nozzle for quick rises. Vehicle washing may be done at any time on the immediate premises of a commercial car wash or commercial service station. Further, such washing may be exempted from these regulations if the health, safety, and welfare of the public is contingent upon frequent vehicle cleansing, such as garbage trucks and vehicles used to transport food and perishables.
 - c. Use of water to fill, refill, or add to any indoor or outdoor swimming pools, wading pools, or jacuzzi-type pools is prohibited except on designated watering days between the hours of 12:00 midnight and 10:00 a.m. and between 8:00 p.m. and 12:00 midnight.
 - d. Operation of any ornamental fountain or pond for aesthetic or scenic purposes is prohibited except where necessary to support aquatic life or where such fountains or ponds are equipped with a recirculation system.
 - e. Use of water from hydrants shall be limited to fire fighting, related activities, or other activities necessary to maintain public health, safety, and welfare, except that use of water from designated fire hydrants for construction purposes may be allowed under special permit from the city.
 - f. Use of water for the irrigation of golf course greens, tees, and fairways is prohibited except on designated watering days between the hours 12:00 midnight and 10:00 a.m. and between 8:00 p.m. and 12:00 midnight. However, if the golf course utilizes a water source other than that provided by the city, the facility shall not be subject to these regulations.

- g. All restaurants are prohibited from serving water to patrons except upon request of the patron.
- h. The following uses of water are defined as non-essential and are prohibited:
 - 1. Wash down of any sidewalks, walkways, driveways, parking lots, tennis courts, or other hard-surfaced areas;
 - 2. Use of water to wash down buildings or structures for purposes other than immediate fire protection;
 - 3. Use of water for dust control;
 - 4. Flushing gutters or permitting water to run or accumulate in any gutter or street; and
 - 5. Failure to repair a controllable leak(s) within a reasonable period after having been given notice directing the repair of such leak(s).
- i. The city manager may direct any or all commercial, industrial and recreational users to suspend use of city water for purposes other than domestic use.

(d) *Stage 3 response—Severe water shortage conditions.*

Target: Achieve a twelve and one-half (12½) percent reduction in total water use.

- (1) *Best management practices for supply management:* The following measures will be implemented directly by the city to manage limited water supplies and/or reduce water demand: reduce or discontinue flushing of water mains, careful monitoring of system to prevent tank overflows and/or to quickly repair line breaks and possible interconnection to Port Neches water system as back-up supply.
- (2) *Water use restrictions for demand reduction:* All requirements of stage 2 shall remain in effect during stage 3 except:
 - a. Irrigation of landscaped areas shall be limited to designated watering days between the hours of 12:00 midnight and 10:00 a.m. and between 8:00 p.m. and 12:00 midnight and shall be by means of hand-held hoses, hand-held buckets, drip irrigation, or permanently installed automatic sprinkler system only. The use of hose-end sprinklers is prohibited at all times.
 - b. The watering of golf course tees, greens and fairways is prohibited unless the golf course utilizes a water source other than that provided by the city.
 - c. The city manager may direct any or all commercial, industrial and recreational users to suspend use of city water for purposes other than domestic use.

(e) *Stage 4 response—Critical water shortage conditions.*

Target: Achieve a fifteen (15) percent reduction in total water use.

- (1) *Best management practices for supply management:* The following measures will be implemented directly by the city to manage limited water supplies and/or reduce water demand: reduce or discontinue flushing of water mains, careful monitoring of system to prevent tank overflows and quickly repair line breaks/leaks and possible interconnection to Port Neches water system as back-up supply.
- (2) *Water use restrictions for reducing demand:* All requirements of stage 2 and 3 shall remain in effect during stage 4 except:
 - a. Irrigation of landscaped areas shall be limited to designated watering days between the hours of 6:00 a.m. and 10:00 a.m. and between 8:00 p.m. and 12:00 midnight and shall be by means of hand-held hoses, hand-held buckets, or drip irrigation only. The use of hose-end sprinklers or permanently installed automatic sprinkler systems are prohibited at all times.
 - b. Use of water to wash any motor vehicle, motorbike, boat, trailer, airplane or other vehicle not occurring on the premises of a commercial car wash and commercial service stations and not in the immediate

interest of public health, safety, and welfare is prohibited. Further, such vehicle washing at commercial car washes and commercial service stations shall occur only between the hours of 6:00 a.m. and 10:00 a.m. and between 6:00 p.m. and 10:00 p.m.

- c. The filling, refilling, or adding of water to swimming pools, wading pools, and jacuzzi-type pools is prohibited.
- d. No application for new, additional, expanded, or increased-in-size water service connections, meters, service lines, pipeline extensions, mains, or water service facilities of any kind shall be approved, and time limits for approval of such applications are hereby suspended for such time as this drought response stage or a higher-numbered stage shall be in effect.
- e. The city manager may direct any or all commercial, industrial and recreational users to suspend use of city water for purposes other than domestic use.

(f) *Stage 5 response—Emergency water shortage conditions.*

Target: Achieve a minimum fifteen (15) percent reduction in total water use.

- (1) *Best management practices for supply management:* The following measures will be implemented directly by the city to manage limited water supplies and/or reduce water demand: reduce or discontinue flushing of water mains, careful monitoring of system to prevent tank overflows and to quickly repair line breaks/leaks, and notify the public and enforcement agencies of the immediate need for water use reduction.
- (2) *Water use restrictions for reducing demand.* All requirements of stage 2, 3, and 4 shall remain in effect during stage 5 except:
 - a. Irrigation of landscaped areas is absolutely prohibited.
 - b. Use of water to wash any motor vehicle, motorbike, boat, trailer, airplane or other vehicle is absolutely prohibited.
 - c. The city manager may direct any or all commercial, industrial and recreational users to suspend use of city water for purposes other than domestic use.

(Ord. No. 06-04, §§ 1, 2, 1-23-06)

Sec. 7-11. - Enforcement.

- (a) No person shall knowingly or intentionally allow the use of water from the city for residential, commercial, industrial, agricultural, governmental, or any other purpose in a manner contrary to any provision of this plan, or in an amount in excess of that permitted by the drought response stage in effect at the time pursuant to action taken by city's designee, in accordance with provisions of this plan.
- (b) The penalty for violation of this chapter shall be the same as provided in section 1-5 of the City Code of Ordinances, as amended.
- (c) Each day that one (1) or more of the provisions in this plan is violated shall constitute a separate offense. If a person is convicted of three (3) or more distinct violations of this plan, the city's designee shall, upon due notice to the customer, be authorized to discontinue water service to the premises where such violations occur. Services discontinued under such circumstances shall be restored only upon payment of a re-connection charge, and any other costs incurred by the city in discontinuing service. In addition, suitable assurance must be given to the city's designee that the same action shall not be repeated while the plan is in effect. Compliance with this plan may also be sought through injunctive relief in the city court.
- (d) Any person, including a person classified as a water customer of the city, in apparent control of the property where a violation occurs or originates shall be presumed to be the violator, and proof that the violation occurred on the

person's property shall constitute a rebuttable presumption that the person in apparent control of the property committed the violation, but any such person shall have the right to show that he/she did not commit the violation. Parents shall be presumed to be responsible for violations of their minor children and proof that a violation, committed by a child, occurred on property within the parents' control shall constitute a rebuttable presumption that the parent committed the violation, but any such parent may be excused if he/she proves that he/she had previously directed the child not to use the water as it was used in violation of this plan and that the parent could not have reasonably known of the violation.

- (e) Any employee of the city and/or police officer may issue a citation to a person he/she reasonably believes to be in violation of this chapter. The citation shall be prepared in duplicate and shall contain the name and address of the alleged violator, if known, the offense charged, and shall direct him/her to appear in justice of the peace court on the date shown on the citation for which the date shall not be less than three (3) days nor more than five (5) days from the date the citation was issued. The alleged violator shall be served a copy of the citation. Service of the citation shall be complete upon delivery of the citation to the alleged violator, to an agent or employee of a violator, or to a person over fourteen (14) years of age who is a member of the violator's immediate family or is a resident of the violator's residence. The alleged violator shall appear in justice of the peace court to enter a plea of guilty or not guilty for the violation of this plan. If the alleged violator fails to appear in justice of the peace court, a warrant for his/her arrest may be issued. A summons to appear may be issued in lieu of an arrest warrant. These cases shall be expedited and given preferential setting in justice of the peace court before all other cases.
- (f) The city also may, at its option, install a flow restriction device in the service line of any user for violation of this ordinance. The city may charge the user for the cost of the flow restriction device, including installation, and may disconnect service for failure to pay for this item.
- (g) To further enhance the effectiveness of water conservation. The city council may, after declaring a water usage emergency, impose surcharges not to exceed the following amounts on all water usage (per two-month period) by any users:

0—6,000 gallons	\$0.75 per 1,000 gallons
6,000—10,000 gallons	\$1.00 per 1,000 gallons
10,000—20,000 gallons	\$1.50 per 1,000 gallons
Over 20,000 gallons	\$1.75 per 1,000 gallons

No surcharge for any bracket may be less than the surcharge for the next lower bracket. These surcharges shall become effective for each users as soon as the city can read the meter serving that user and notify that user.

(Ord. No. 06-04, §§ 1, 2, 1-23-06)

Sec. 7-12. - Variances.

- (a) The city's designee, may, in writing, grant temporary variance for existing water uses otherwise prohibited under this plan if it is determined that failure to grant such variance would cause an emergency condition adversely affecting the health, sanitation, or fire protection for the public or the person requesting such variance and if one (1) or more of the following conditions are met:
 - (1) Compliance with this plan cannot be technically accomplished during the duration of the water supply

shortage or other condition for which the plan is in effect.

- (2) Alternative methods can be implemented which will achieve the same level of reduction in water use.
- (b) Persons requesting an exemption from the provisions of this chapter shall file a petition for variance with the city within five (5) days after the plan or a particular drought response stage has been invoked. All petitions for variances shall be reviewed by the city's designee, and shall include the following:
- (1) Name and address of the petitioner(s).
 - (2) Purpose of water use.
 - (3) Specific provision(s) of the plan from which the petitioner is requesting relief.
 - (4) Detailed statement as to how the specific provision of the plan adversely affects the petitioner or what damage or harm will occur to the petitioner or others if petitioner complies with this drought contingency plan.
 - (5) Description of the relief requested.
 - (6) Period of time for which the variance is sought.
 - (7) Alternative water use restrictions or other measures the petitioner is taking or proposes to take to meet the intent of this plan and the compliance date.
 - (8) Other pertinent information.
- (c) Persons who anticipate, in advance, the need for a variance may apply for a standing variance by filing a petition with the city. If a standing variance is granted, the city reserves the right to override or modify such variance as conditions arise.
- (d) Variances granted by the city shall be subject to the following conditions, unless waived or modified by the city's designee:
- (1) Variances granted shall include a timetable for compliance.
 - (2) Variances granted shall expire when the plan is no longer in effect, unless the petitioner has failed to meet specified requirements.
 - (3) No variance shall be retroactive or otherwise justify any violation of this plan occurring prior to the issuance of the variance.

(Ord. No. 06-04, §§ 1, 2, 1-23-06)

APPENDIX A

Regulation and Guidelines Pertaining to Water Conservation Plan

30 TAC Chapter 288

TWDB Form 1968

City Ordinance 2006 -03 - Water Conservation Plan

City Ordinance 2006-04 – Drought Contingency Plan

East Texas Regional Water-Planning Group

ORDINANCE NO. 2019-09

AN ORDINANCE AMENDING THE CODE OF ORDINANCES OF THE CITY OF GROVES, TEXAS, BY REPEALING ARTICLE VII. "WATER CONSERVATION", OF CHAPTER 27 "UTILITIES", AND ENACTING IN ITS PLACE AN ORDINANCE ADOPTING A REVISED WATER CONSERVATION PLAN, DATED JUNE, 2019, WHICH PROVIDES FOR AVAILABILITY OF PLAN FOR INSPECTION; PROVIDING FOR IMPLEMENTATION OF PROGRAM; PROVIDING A REPEALER CLAUSE; PROVIDING FOR SEVERABILITY; PROVIDING FOR CODIFICATION; PROVIDING FOR PUBLICATION BY PUBLISHING THE CAPTION ONLY; AND PROVIDING AN EFFECTIVE DATE

WHEREAS, the City of Groves is required by the Texas Water Development Board and the Texas Commission on Environmental Quality to maintain a Water Conservation Plan approved by the City Council; and

WHEREAS, the existing Water Conservation Plan of the City of Groves (Article VII. "Water Conservation" of Chapter 27 of the Code of Ordinances of the City of Groves) has been revised and renewed to meet current guidelines by Schaumburg & Polk, Inc., Consulting Engineers; and

WHEREAS, said revised Water Conservation Plan has been submitted to and approved by the Texas Water Development Board;

NOW THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF GROVES, TEXAS:

SECTION 1: - That Article VII. "Water Conservation" of Chapter 27, "Utilities", of the Code of Ordinances, City of Groves, Texas, is hereby repealed and the following is enacted in lieu thereof.

SECTION 2: - ADOPTION OF WATER CONSERVATION PLAN. The City Council hereby approves and adopts the Water Conservation Plan dated June, 2019, as prepared by Schaumburg & Polk, Inc., and previously submitted to the Texas Water Development Board, attached hereto as Exhibit "A", and made a part hereof for all purposes, as the official policy of the City of Groves.

SECTION 3: - AVAILABILITY OF PLAN. The above referenced Water Conservation Plan shall be made available for public inspection in the City Clerk's office on a permanent basis and shall be plainly labeled as being the plan adopted by the City.

SECTION 4: - IMPLEMENTATION. The City Manager shall be responsible for the overall implementation of the program. In the event that measures requiring separate action by the City Council are found necessary, the City Manager shall be responsible for requesting a special or emergency Council meeting if necessary, and for presenting the matter to the Council for action.

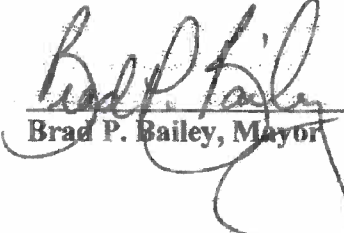
SECTION 5: - That all ordinances or parts of ordinances or sections of the code or parts of sections of the code in conflict with this section are hereby repealed but only to the extent of the conflict.

SECTION 6: - That if any part of this Ordinance is for any reason held to be invalid or unconstitutional, the validity of the remaining portion shall not be affected thereby, it being the express intent that the remaining portion or portions shall remain in full force and effect.

SECTION 7: - That this ordinance shall become a part of the Code of Ordinances of the City of Groves and may be codified therein accordingly.

SECTION 8: - That this ordinance shall be in effect from and after its passage and publication of the caption only as required by the City Charter.

PASSED, APPROVED and ADOPTED at a regular meeting of the City Council
of the City of Groves held on the 22rd day of July, 2019.


Brad P. Bailey, Mayor

ATTEST:


Kimbra B. Lowery, City Clerk

The foregoing ordinance, including all the provisions thereof, is hereby approved as
to form and legality.


James M. Black, City Attorney

SUBCHAPTER A: WATER CONSERVATION PLANS
§§288.1 - 288.7
Effective August 16, 2018

§288.1. Definitions.

The following words and terms, when used in this chapter, shall have the following meanings, unless the context clearly indicates otherwise.

(1) Agricultural or Agriculture--Any of the following activities:

(A) cultivating the soil to produce crops for human food, animal feed, or planting seed or for the production of fibers;

(B) the practice of floriculture, viticulture, silviculture, and horticulture, including the cultivation of plants in containers or non-soil media by a nursery grower;

(C) raising, feeding, or keeping animals for breeding purposes or for the production of food or fiber, leather, pelts, or other tangible products having a commercial value;

(D) raising or keeping equine animals;

(E) wildlife management; and

(F) planting cover crops, including cover crops cultivated for transplantation, or leaving land idle for the purpose of participating in any governmental program or normal crop or livestock rotation procedure.

(2) Agricultural use--Any use or activity involving agriculture, including irrigation.

(3) Best management practices--Voluntary efficiency measures that save a quantifiable amount of water, either directly or indirectly, and that can be implemented within a specific time frame.

(4) Conservation--Those practices, techniques, and technologies that reduce the consumption of water, reduce the loss or waste of water, improve the efficiency in the use of water, or increase the recycling and reuse of water so that a water supply is made available for future or alternative uses.

(5) Commercial use--The use of water by a place of business, such as a hotel, restaurant, or office building. This does not include multi-family residences or agricultural, industrial, or institutional users.

(6) Drought contingency plan--A strategy or combination of strategies for temporary supply and demand management responses to temporary and potentially recurring water supply shortages and other water supply emergencies. A drought contingency plan may be a separate document identified as such or may be contained within another water management document(s).

(7) Industrial use--The use of water in processes designed to convert materials of a lower order of value into forms having greater usability and commercial value, and the development of power by means other than hydroelectric, but does not include agricultural use.

(8) Institutional use--The use of water by an establishment dedicated to public service, such as a school, university, church, hospital, nursing home, prison, or government facility. All facilities dedicated to public service are considered institutional regardless of ownership.

(9) Irrigation--The agricultural use of water for the irrigation of crops, trees, and pastureland, including, but not limited to, golf courses and parks which do not receive water from a public water supplier.

(10) Irrigation water use efficiency--The percentage of that amount of irrigation water which is beneficially used by agriculture crops or other vegetation relative to the amount of water diverted from the source(s) of supply. Beneficial uses of water for irrigation purposes include, but are not limited to, evapotranspiration needs for vegetative maintenance and growth, salinity management, and leaching requirements associated with irrigation.

(11) Mining use--The use of water for mining processes including hydraulic use, drilling, washing sand and gravel, and oil field re-pressuring.

(12) Municipal use--The use of potable water provided by a public water supplier as well as the use of sewage effluent for residential, commercial, industrial, agricultural, institutional, and wholesale uses.

(13) Nursery grower--A person engaged in the practice of floriculture, viticulture, silviculture, and horticulture, including the cultivation of plants in containers or nonsoil media, who grows more than 50% of the products that the person either sells or leases, regardless of the variety sold, leased, or grown. For the purpose of this definition, grow means the actual cultivation or propagation of

the product beyond the mere holding or maintaining of the item prior to sale or lease, and typically includes activities associated with the production or multiplying of stock such as the development of new plants from cuttings, grafts, plugs, or seedlings.

(14) Pollution--The alteration of the physical, thermal, chemical, or biological quality of, or the contamination of, any water in the state that renders the water harmful, detrimental, or injurious to humans, animal life, vegetation, or property, or to the public health, safety, or welfare, or impairs the usefulness or the public enjoyment of the water for any lawful or reasonable purpose.

(15) Public water supplier--An individual or entity that supplies water to the public for human consumption.

(16) Regional water planning group--A group established by the Texas Water Development Board to prepare a regional water plan under Texas Water Code, §16.053.

(17) Residential gallons per capita per day--The total gallons sold for residential use by a public water supplier divided by the residential population served and then divided by the number of days in the year.

(18) Residential use--The use of water that is billed to single and multi-family residences, which applies to indoor and outdoor uses.

(19) Retail public water supplier--An individual or entity that for compensation supplies water to the public for human consumption. The term does not include an individual or entity that supplies water to itself or its employees or tenants when that water is not resold to or used by others.

(20) Reuse--The authorized use for one or more beneficial purposes of use of water that remains unconsumed after the water is used for the original purpose of use and before that water is either disposed of or discharged or otherwise allowed to flow into a watercourse, lake, or other body of state-owned water.

(21) Total use--The volume of raw or potable water provided by a public water supplier to billed customer sectors or nonrevenue uses and the volume lost during conveyance, treatment, or transmission of that water.

(22) Total gallons per capita per day (GPCD)--The total amount of water diverted and/or pumped for potable use divided by the total permanent population divided by the days of the year. Diversion volumes of reuse as defined in

this chapter shall be credited against total diversion volumes for the purposes of calculating GPCD for targets and goals.

(23) Water conservation coordinator--The person designated by a retail public water supplier that is responsible for implementing a water conservation plan.

(24) Water conservation plan--A strategy or combination of strategies for reducing the volume of water withdrawn from a water supply source, for reducing the loss or waste of water, for maintaining or improving the efficiency in the use of water, for increasing the recycling and reuse of water, and for preventing the pollution of water. A water conservation plan may be a separate document identified as such or may be contained within another water management document(s).

(25) Wholesale public water supplier--An individual or entity that for compensation supplies water to another for resale to the public for human consumption. The term does not include an individual or entity that supplies water to itself or its employees or tenants as an incident of that employee service or tenancy when that water is not resold to or used by others, or an individual or entity that conveys water to another individual or entity, but does not own the right to the water which is conveyed, whether or not for a delivery fee.

(26) Wholesale use--Water sold from one entity or public water supplier to other retail water purveyors for resale to individual customers.

Adopted July 25, 2018

Effective August 16, 2018

§288.2. Water Conservation Plans for Municipal Uses by Public Water Suppliers.

(a) A water conservation plan for municipal water use by public water suppliers must provide information in response to the following. If the plan does not provide information for each requirement, the public water supplier shall include in the plan an explanation of why the requirement is not applicable.

(1) Minimum requirements. All water conservation plans for municipal uses by public water suppliers must include the following elements:

(A) a utility profile in accordance with the Texas Water Use Methodology, including, but not limited to, information regarding population and customer data, water use data (including total gallons per capita per day (GPCD) and residential GPCD), water supply system data, and wastewater system data;

(B) a record management system which allows for the classification of water sales and uses into the most detailed level of water use data currently available to it, including, if possible, the sectors listed in clauses (i) - (vi) of this subparagraph. Any new billing system purchased by a public water supplier must be capable of reporting detailed water use data as described in clauses (i) - (vi) of this subparagraph;

(i) residential;

(I) single family;

(II) multi-family;

(ii) commercial;

(iii) institutional;

(iv) industrial;

(v) agricultural; and,

(vi) wholesale.

(C) specific, quantified five-year and ten-year targets for water savings to include goals for water loss programs and goals for municipal use in total GPCD and residential GPCD. The goals established by a public water supplier under this subparagraph are not enforceable;

(D) metering device(s), within an accuracy of plus or minus 5.0% in order to measure and account for the amount of water diverted from the source of supply;

(E) a program for universal metering of both customer and public uses of water, for meter testing and repair, and for periodic meter replacement;

(F) measures to determine and control water loss (for example, periodic visual inspections along distribution lines; annual or monthly audit of the water system to determine illegal connections; abandoned services; etc.);

(G) a program of continuing public education and information regarding water conservation;

(H) a water rate structure which is not "promotional," i.e., a rate structure which is cost-based and which does not encourage the excessive use of water;

(I) a reservoir systems operations plan, if applicable, providing for the coordinated operation of reservoirs owned by the applicant within a common watershed or river basin in order to optimize available water supplies; and

(J) a means of implementation and enforcement which shall be evidenced by:

(i) a copy of the ordinance, resolution, or tariff indicating official adoption of the water conservation plan by the water supplier; and

(ii) a description of the authority by which the water supplier will implement and enforce the conservation plan; and

(K) documentation of coordination with the regional water planning groups for the service area of the public water supplier in order to ensure consistency with the appropriate approved regional water plans.

(2) Additional content requirements. Water conservation plans for municipal uses by public drinking water suppliers serving a current population of 5,000 or more and/or a projected population of 5,000 or more within the next ten years subsequent to the effective date of the plan must include the following elements:

(A) a program of leak detection, repair, and water loss accounting for the water transmission, delivery, and distribution system;

(B) a requirement in every wholesale water supply contract entered into or renewed after official adoption of the plan (by either ordinance, resolution, or tariff), and including any contract extension, that each successive wholesale customer develop and implement a water conservation plan or water conservation measures using the applicable elements in this chapter. If the customer intends to resell the water, the contract between the initial supplier and customer must provide that the contract for the resale of the water must have water conservation requirements so that each successive customer in the resale of the water will be required to implement water conservation measures in accordance with the provisions of this chapter.

(3) Additional conservation strategies. Any combination of the following strategies shall be selected by the water supplier, in addition to the minimum requirements in paragraphs (1) and (2) of this subsection, if they are necessary to achieve the stated water conservation goals of the plan. The commission may require that any of the following strategies be implemented by the water supplier if the commission determines that the strategy is necessary to achieve the goals of the water conservation plan:

(A) conservation-oriented water rates and water rate structures such as uniform or increasing block rate schedules, and/or seasonal rates, but not flat rate or decreasing block rates;

(B) adoption of ordinances, plumbing codes, and/or rules requiring water-conserving plumbing fixtures to be installed in new structures and existing structures undergoing substantial modification or addition;

(C) a program for the replacement or retrofit of water-conserving plumbing fixtures in existing structures;

(D) reuse and/or recycling of wastewater and/or graywater;

(E) a program for pressure control and/or reduction in the distribution system and/or for customer connections;

(F) a program and/or ordinance(s) for landscape water management;

(G) a method for monitoring the effectiveness and efficiency of the water conservation plan; and

(H) any other water conservation practice, method, or technique which the water supplier shows to be appropriate for achieving the stated goal or goals of the water conservation plan.

(b) A water conservation plan prepared in accordance with 31 TAC §363.15 (relating to Required Water Conservation Plan) of the Texas Water Development Board and substantially meeting the requirements of this section and other applicable commission rules may be submitted to meet application requirements in accordance with a memorandum of understanding between the commission and the Texas Water Development Board.

(c) A public water supplier for municipal use shall review and update its water conservation plan, as appropriate, based on an assessment of previous five-

year and ten-year targets and any other new or updated information. The public water supplier for municipal use shall review and update the next revision of its water conservation plan every five years to coincide with the regional water planning group.

Adopted November 14, 2012

Effective December 6, 2012

§288.3. Water Conservation Plans for Industrial or Mining Use.

(a) A water conservation plan for industrial or mining uses of water must provide information in response to each of the following elements. If the plan does not provide information for each requirement, the industrial or mining water user shall include in the plan an explanation of why the requirement is not applicable.

(1) a description of the use of the water in the production process, including how the water is diverted and transported from the source(s) of supply, how the water is utilized in the production process, and the estimated quantity of water consumed in the production process and therefore unavailable for reuse, discharge, or other means of disposal;

(2) specific, quantified five-year and ten-year targets for water savings and the basis for the development of such goals. The goals established by industrial or mining water users under this paragraph are not enforceable;

(3) a description of the device(s) and/or method(s) within an accuracy of plus or minus 5.0% to be used in order to measure and account for the amount of water diverted from the source of supply;

(4) leak-detection, repair, and accounting for water loss in the water distribution system;

(5) application of state-of-the-art equipment and/or process modifications to improve water use efficiency; and

(6) any other water conservation practice, method, or technique which the user shows to be appropriate for achieving the stated goal or goals of the water conservation plan.

(b) An industrial or mining water user shall review and update its water conservation plan, as appropriate, based on an assessment of previous five-year and ten-year targets and any other new or updated information. The industrial or mining water user shall review and update the next revision of its water

conservation plan every five years to coincide with the regional water planning group.

Adopted November 14, 2012

Effective December 6, 2012

§288.4. Water Conservation Plans for Agricultural Use.

(a) A water conservation plan for agricultural use of water must provide information in response to the following subsections. If the plan does not provide information for each requirement, the agricultural water user must include in the plan an explanation of why the requirement is not applicable.

(1) For an individual agricultural user other than irrigation:

(A) a description of the use of the water in the production process, including how the water is diverted and transported from the source(s) of supply, how the water is utilized in the production process, and the estimated quantity of water consumed in the production process and therefore unavailable for reuse, discharge, or other means of disposal;

(B) specific, quantified five-year and ten-year targets for water savings and the basis for the development of such goals. The goals established by agricultural water users under this subparagraph are not enforceable;

(C) a description of the device(s) and/or method(s) within an accuracy of plus or minus 5.0% to be used in order to measure and account for the amount of water diverted from the source of supply;

(D) leak-detection, repair, and accounting for water loss in the water distribution system;

(E) application of state-of-the-art equipment and/or process modifications to improve water use efficiency; and

(F) any other water conservation practice, method, or technique which the user shows to be appropriate for achieving the stated goal or goals of the water conservation plan.

(2) For an individual irrigation user:

(A) a description of the irrigation production process which shall include, but is not limited to, the type of crops and acreage of each crop to be

irrigated, monthly irrigation diversions, any seasonal or annual crop rotation, and soil types of the land to be irrigated;

(B) a description of the irrigation method, or system, and equipment including pumps, flow rates, plans, and/or sketches of the system layout;

(C) a description of the device(s) and/or methods, within an accuracy of plus or minus 5.0%, to be used in order to measure and account for the amount of water diverted from the source of supply;

(D) specific, quantified five-year and ten-year targets for water savings including, where appropriate, quantitative goals for irrigation water use efficiency and a pollution abatement and prevention plan. The goals established by an individual irrigation water user under this subparagraph are not enforceable;

(E) water-conserving irrigation equipment and application system or method including, but not limited to, surge irrigation, low pressure sprinkler, drip irrigation, and nonleaking pipe;

(F) leak-detection, repair, and water-loss control;

(G) scheduling the timing and/or measuring the amount of water applied (for example, soil moisture monitoring);

(H) land improvements for retaining or reducing runoff, and increasing the infiltration of rain and irrigation water including, but not limited to, land leveling, furrow diking, terracing, and weed control;

(I) tailwater recovery and reuse; and

(J) any other water conservation practice, method, or technique which the user shows to be appropriate for preventing waste and achieving conservation.

(3) For a system providing agricultural water to more than one user:

(A) a system inventory for the supplier's:

(i) structural facilities including the supplier's water storage, conveyance, and delivery structures;

(ii) management practices, including the supplier's operating rules and regulations, water pricing policy, and a description of practices and/or devices used to account for water deliveries; and

(iii) a user profile including square miles of the service area, the number of customers taking delivery of water by the system, the types of crops, the types of irrigation systems, the types of drainage systems, and total acreage under irrigation, both historical and projected;

(B) specific, quantified five-year and ten-year targets for water savings including maximum allowable losses for the storage and distribution system. The goals established by a system providing agricultural water to more than one user under this subparagraph are not enforceable;

(C) a description of the practice(s) and/or device(s) which will be utilized to measure and account for the amount of water diverted from the source(s) of supply;

(D) a monitoring and record management program of water deliveries, sales, and losses;

(E) a leak-detection, repair, and water loss control program;

(F) a program to assist customers in the development of on-farm water conservation and pollution prevention plans and/or measures;

(G) a requirement in every wholesale water supply contract entered into or renewed after official adoption of the plan (by either ordinance, resolution, or tariff), and including any contract extension, that each successive wholesale customer develop and implement a water conservation plan or water conservation measures using the applicable elements in this chapter. If the customer intends to resell the water, the contract between the initial supplier and customer must provide that the contract for the resale of the water must have water conservation requirements so that each successive customer in the resale of the water will be required to implement water conservation measures in accordance with applicable provisions of this chapter;

(H) official adoption of the water conservation plan and goals, by ordinance, rule, resolution, or tariff, indicating that the plan reflects official policy of the supplier;

(I) any other water conservation practice, method, or technique which the supplier shows to be appropriate for achieving conservation; and

(J) documentation of coordination with the regional water planning groups, in order to ensure consistency with appropriate approved regional water plans.

(b) A water conservation plan prepared in accordance with the rules of the United States Department of Agriculture Natural Resource Conservation Service, the Texas State Soil and Water Conservation Board, or other federal or state agency and substantially meeting the requirements of this section and other applicable commission rules may be submitted to meet application requirements in accordance with a memorandum of understanding between the commission and that agency.

(c) An agricultural water user shall review and update its water conservation plan, as appropriate, based on an assessment of previous five-year and ten-year targets and any other new or updated information. An agricultural water user shall review and update the next revision of its water conservation plan every five years to coincide with the regional water planning group.

Adopted November 14, 2012

Effective December 6, 2012

§288.5. Water Conservation Plans for Wholesale Water Suppliers.

A water conservation plan for a wholesale water supplier must provide information in response to each of the following paragraphs. If the plan does not provide information for each requirement, the wholesale water supplier shall include in the plan an explanation of why the requirement is not applicable.

(1) Minimum requirements. All water conservation plans for wholesale water suppliers must include the following elements:

(A) a description of the wholesaler's service area, including population and customer data, water use data, water supply system data, and wastewater data;

(B) specific, quantified five-year and ten-year targets for water savings including, where appropriate, target goals for municipal use in gallons per capita per day for the wholesaler's service area, maximum acceptable water loss, and the basis for the development of these goals. The goals established by wholesale water suppliers under this subparagraph are not enforceable;

(C) a description as to which practice(s) and/or device(s) will be utilized to measure and account for the amount of water diverted from the source(s) of supply;

(D) a monitoring and record management program for determining water deliveries, sales, and losses;

(E) a program of metering and leak detection and repair for the wholesaler's water storage, delivery, and distribution system;

(F) a requirement in every water supply contract entered into or renewed after official adoption of the water conservation plan, and including any contract extension, that each successive wholesale customer develop and implement a water conservation plan or water conservation measures using the applicable elements of this chapter. If the customer intends to resell the water, then the contract between the initial supplier and customer must provide that the contract for the resale of the water must have water conservation requirements so that each successive customer in the resale of the water will be required to implement water conservation measures in accordance with applicable provisions of this chapter;

(G) a reservoir systems operations plan, if applicable, providing for the coordinated operation of reservoirs owned by the applicant within a common watershed or river basin. The reservoir systems operations plans shall include optimization of water supplies as one of the significant goals of the plan;

(H) a means for implementation and enforcement, which shall be evidenced by a copy of the ordinance, rule, resolution, or tariff, indicating official adoption of the water conservation plan by the water supplier; and a description of the authority by which the water supplier will implement and enforce the conservation plan; and

(I) documentation of coordination with the regional water planning groups for the service area of the wholesale water supplier in order to ensure consistency with the appropriate approved regional water plans.

(2) Additional conservation strategies. Any combination of the following strategies shall be selected by the water wholesaler, in addition to the minimum requirements of paragraph (1) of this section, if they are necessary in order to achieve the stated water conservation goals of the plan. The commission may require by commission order that any of the following strategies be implemented by the water supplier if the commission determines that the strategies are necessary in order for the conservation plan to be achieved:

(A) conservation-oriented water rates and water rate structures such as uniform or increasing block rate schedules, and/or seasonal rates, but not flat rate or decreasing block rates;

(B) a program to assist agricultural customers in the development of conservation pollution prevention and abatement plans;

(C) a program for reuse and/or recycling of wastewater and/or graywater; and

(D) any other water conservation practice, method, or technique which the wholesaler shows to be appropriate for achieving the stated goal or goals of the water conservation plan.

(3) Review and update requirements. The wholesale water supplier shall review and update its water conservation plan, as appropriate, based on an assessment of previous five-year and ten-year targets and any other new or updated information. A wholesale water supplier shall review and update the next revision of its water conservation plan every five years to coincide with the regional water planning group.

Adopted November 14, 2012

Effective December 6, 2012

§288.6. Water Conservation Plans for Any Other Purpose or Use.

A water conservation plan for any other purpose or use not covered in this subchapter shall provide information where applicable about those practices, techniques, and technologies that will be used to reduce the consumption of water, prevent or reduce the loss or waste of water, maintain or improve the efficiency in the use of water, increase the recycling and reuse of water, or prevent the pollution of water.

Adopted April 5, 2000

Effective April 27, 2000

§288.7. Plans Submitted with a Water Right Application for New or Additional State Water.

(a) A water conservation plan submitted with an application for a new or additional appropriation of water must include data and information which:

(1) supports the applicant's proposed use of water with consideration of the water conservation goals of the water conservation plan;

(2) evaluates conservation as an alternative to the proposed appropriation; and

(3) evaluates any other feasible alternative to new water development including, but not limited to, waste prevention, recycling and reuse, water transfer and marketing, regionalization, and optimum water management practices and procedures.

(b) It shall be the burden of proof of the applicant to demonstrate that no feasible alternative to the proposed appropriation exists and that the requested amount of appropriation is necessary and reasonable for the proposed use.

Effective May 3, 1993

WATER CONSERVATION PLAN GUIDANCE CHECKLIST

(Formerly WRD-022)

This guidance checklist applies to all Texas Water Development Board (TWDB) Financial Assistance Programs specified in its rules under Texas Administrative Code 31, Chapters 355, 363, 371, 375, 382, and 384 and to public utilities that provide potable water service to 3,300 or more connections. The Water Conservation Plan must meet the minimum requirements as stated below, and should be no older than 5 years. The Water Conservation Plan should also include an Utility Profile, which is an evaluation of the applicant's water and wastewater system and customer water use characteristics, to identify water conservation opportunities and should set goals to be accomplished by water conservation measures. The water conservation plan shall provide information in response to the following minimum requirements. If the plan does not provide information for each minimum requirement, the applicant shall include in the plan an explanation of why the requirement is not applicable. The TWDB will accept current Water Conservation Plans determined by the Texas Commission on Environmental Quality (TCEQ) to satisfy the requirements of 30 TAC Chapter 288.

Basically, the *Water Conservation Plan* is a strategy or combination of strategies for reducing the consumption of water, reducing the loss or waste of water, improving or maintaining the efficiency in the use of water, or increasing recycling and reuse of water. It contains best management practices measures intended to meet the targets and goals identified in the plan. The *Drought Contingency (Emergency Demand Management) Plan* is a strategy or combination of strategies for responding to temporary and potentially recurring water supply shortages and other supply emergencies.

THE WATER CONSERVATION PLAN REQUIREMENTS:

- A. ____ An evaluation of the Applicant's water and wastewater system and customer use characteristics to identify water conservation opportunities and potential targets and goals. Completion of the ***Water Conservation Utility Profile, TWDB-1965*** as part of the evaluation is required and should be submitted with the Plan. The utility profile should include the water sales and use for the following classifications: residential (both for single-family and multi-family), commercial, institutional, industrial, agricultural, and wholesale; as appropriate.
- B. ____ Inclusion of five-year and ten-year targets that are specific and quantified for water savings and include goals for water loss programs in gallons per capita per day, and goals for municipal use and residential use, in gallons per capita per day. A base use figure should be included to be able to calculate your savings. Consider state and regional targets and goals, local climate, and demographics. Consider the anticipated savings that can be achieved by utilizing appropriate best management practices and other conservation techniques.
- C. ____ A schedule for implementing the plan to achieve the applicant's targets and goals.
- D. ____ A method for tracking the implementation and effectiveness of the plan. The method should track annual water use and provide information sufficient to evaluate the implementation of conservation measures. The plan should measure progress annually, and evaluate the progress towards meeting the goals.
- E. ____ A master meter to measure and account for the amount of water diverted from the source of supply.
- F. ____ A program of universal metering of both customer and public uses of water, for meter testing, repair and for periodic replacement.

G. ___ Measures to determine and control water loss (for example, periodic visual inspections along distribution lines; annual or monthly audit of the water system to determine illegal connections, abandoned services, etc.)

H. ___ A continuous program of leak detection, repair, and water loss accounting for the transmission, delivery, and distribution system in order to control water loss.

I. ___ A program of continuing education and information regarding water conservation. This should include providing water conservation information directly to each residential, industrial and commercial customer at least annually, and providing water conservation literature to new customers when they apply for service.

J. ___ A water rate structure which is not "promotional," i.e., a rate structure which is cost-based and which does not encourage the excessive use of water. Include copy of the rate structure.

K. ___ A means of implementation and enforcement, evidenced by adoption of the plan:

1. a copy of the ordinance, resolution, or tariff indicating official adoption of the water conservation plan by the applicant and
2. a description of the authority by which the applicant will implement and enforce the conservation plan.

L. ___ If the Applicant will utilize the project financed by the TWDB to furnish water or wastewater services to another supplying entity that in turn will furnish the water or wastewater services to the ultimate consumer, the requirements for the water conservation plan also pertain to these supplier entities. To comply with this requirement the applicant shall:

1. submit its own water conservation plan;
2. submit the other entity's (or entities) water conservation plan;
3. require, by contract, that the other entity (or entities), adopt a water conservation plan that conforms to the board's requirement and submit it to the board. If the requirement is to be included in an existing water or wastewater service contract, it may be included, at the earliest of the renewal or substantial amendment of that contract, or by other appropriate measures.

M. ___ Documentation that the regional water planning group for the service area of the applicant has been notified of the applicant's water conservation plan.

Note: The water conservation plan may also include other conservation methods or techniques that the applicant deems appropriate.

N. The Drought Contingency Plan (for Financial Assistance Programs) shall include:

1. ___ **Trigger conditions.** Describe information to be monitored. For example, reservoir levels, daily water demand, water production or distribution system limitations. Supply source contamination and system outage or equipment failure should be considered too. Determine specific quantified targets of water use reduction.
2. ___ **Demand management measures.** Actions that will be implemented by the utility during each stage of the plan when predetermined triggering criteria are met. Drought plans must include quantified and specific targets for water use reductions to be achieved during periods of water shortage and drought. Supply management measures typically can be taken by the utility to better manage available water supply, as well as the use of backup or alternative water sources.

The demand management measures should curtail nonessential water uses, for example, outdoor water use.

3. **___Initiation and termination procedures.** The drought plan must include specific procedures to be followed for the initiation or termination of each drought response stage, including procedures for notification of the public.
4. **___Variances and enforcement.** The plan should specify procedures for considering (approving and denying) variances to the plan. Equally as important is the inclusion of provisions for enforcement of any mandatory water use restrictions, including specification of penalties for violations of such restrictions.
5. **___Measures to inform and educate the public.** Involving the public in the preparation of the drought contingency plan provides an important means for educating the public about the need for the plan and its content.

0. ___Adoption. No water conservation plan is complete without formal adoption by the governing body of the entity. For a municipal water system, adoption would be by the city council as an ordinance, or a resolution by an entity's board of directors.

P. _____Reporting Requirement: Identify who will be responsible for preparing the annual report on the utility profile form TWDB-1965. Loan/Grant Recipients must maintain an approved water conservation program in effect until all financial obligations to the state have been discharged and shall **report annually** to the executive administrator of the TWDB on the progress in implementing each of the minimum requirements in its water conservation plan and the status of any of its customers' water conservation plan required by contract. The content and format for the annual reporting is included in the forms: ***Water Conservation Plan Annual Report, TWDB-1966 for retail water suppliers, TWDB-1967 for non-water suppliers and TWDB-1969 for wholesale water suppliers.***

For information and assistance for utilities requesting TWDB financial assistance contact:

Water Conservation Plans
Texas Water Development Board
P.O. Box 13231
Austin, Texas 78711-3231
wcp@twdb.texas.gov
512-463-7955

Water Conservation Plan Forms:

<http://www.twdb.texas.gov/conservation/municipal/plans/index.asp>

Best Management Practices Information:

<http://www.twdb.texas.gov/conservation/bmps/index.asp>

Quantification Techniques:

<http://www.twdb.texas.gov/conservation/municipal/plans/doc/GDSReport.pdf>

APPENDIX B
Utility Profile

UTILITY PROFILE FOR RETAIL WATER SUPPLIER

Fill out this form as completely as possible.
If a field does not apply to your entity, leave it blank.

CONTACT INFORMATION

Name of Utility: City of Groves

Public Water Supply Identification Number (PWS ID): TX1230012

Certificate of Convenience and Necessity (CCN) Number: 10140

Surface Water Right ID Number: _____

Wastewater ID Number: 20053

Completed By: David Molbert Title: Chief Water Plant Operator

Address: P.O. Box City: Groves Zip Code: 77619

Email: dmolbert@cigrovestx.com Telephone Number: 40996055718

Date: _____

Regional Water Planning Group: 1 [Map](#)

Groundwater Conservation District: _____ [Map](#)

Check all that apply:

- Received financial assistance of \$500,000 or more from TWDB
- Have 3,300 or more retail connections
- Have a surface water right with TCEQ

Section I: Utility Data

A. Population and Service Area Data

1. Current service area size in square miles: 7
 (Attach or email a copy of the service area map.)

2. Provide historical service area population for the previous five years, starting with the most current year.

Year	Historical Population Served By Retail Water Service	Historical Population Served By Wholesale Water Service	Historical Population Served By Wastewater Service
2018	17,346	0	0
2017	17,265	0	0
2016	17,250	0	0
2015	17,250	0	0
2014	16,144	0	0

3. Provide the projected service area population for the following decades.

Year	Projected Population Served By Retail Water Service	Projected Population Served By Wholesale Water Service	Projected Population Served By Wastewater Service
2020	16,144	0	20,360
2030	16,144	0	0
2040	16,144	0	0
2050	16,144	0	0
2060	16,144	0	0

4. Describe the source(s)/method(s) for estimating current and projected populations.

The 2016 East Texas Regional Water Plan Projects a steady population for this system.

B. System Input

Provide system input data for the previous five years.

Total System Input = Self-supplied + Imported – Exported

Year	Self-supplied Water in Gallons	Purchased/Imported Water in Gallons	Exported Water in Gallons	Total System Input	Total GPCD
2018	599,004,040	0	0	599,004,040	95
2017	566,961,616	0	0	566,961,616	90
2016	731,322,222	0	0	731,322,222	116
2015	710,842,424	0	0	710,842,424	113
2014	0	707,878,000	0	707,878,000	120
Historic 5-year Average	521,626,060	141,575,600	0	663,201,660	107

C. Water Supply System (Attach description of water system)

1. Designed daily capacity of system _____ 5,600,000 gallons per day.

2. Storage Capacity:

Elevated _____ 1,500,000 gallons

Ground _____ 4,000,000 gallons

3. List all current water supply sources in gallons.

Water Supply Source	Source Type*	Total Gallons
LNVA	Contract	1,000,000,000
	Choose One	
	Choose One	
	Choose One	
	Choose One	
	Choose One	

*Select one of the following source types: *Surface water, Groundwater, or Contract*

4. If surface water is a source type, do you recycle backwash to the head of the plant?

Yes 23,786 estimated gallons per day

No

D. Projected Demands

1. Estimate the water supply requirements for the next ten years using population trends, historical water use, economic growth, etc.

Year	Population	Water Demands (gallons)
2020	16,144	729,254,411
2021	16,144	727,795,902
2022	16,144	726,340,310
2023	16,144	724,887,629
2024	16,444	723,437,854
2025	16,144	72,199,978
2026	16,144	720,546,996
2027	16,144	719,105,902
2028	16,144	717,667,690
2029	16,144	716,232,355

2. Describe sources of data and how projected water demands were determined. Attach additional sheets if necessary.

The 2016 East Texas Regional Water Plan projects a steady population for this system.

E. High Volume Customers

- List the annual water use, in gallons, for the five highest volume **RETAIL customers**. Select one of the following water use categories to describe the customer; choose Residential, Industrial, Commercial, Institutional, or Agricultural.

Retail Customer	Water Use Category*	Annual Water Use	Treated or Raw
Cantex Healthcare #440	Commercial	5,495,000	Treated
A & A Housing Group L.L.C.	Commercial	3,539,200	Treated
Beverly PLace Apartments	Residential	3,443,000	Treated
Oak Groves Nursing Home	Commercial	314,200	Treated
Tropicana Apts.	Residential	3,078,200	Treated

*For definitions on recommended customer categories for classifying customer water use, refer to the online [Guidance and Methodology for Reporting on Water Conservation and Water Use](#).

- If applicable, list the annual water use for the five highest volume **WHOLESALE customers**. Select one of the following water use categories to describe the customer; choose Municipal, Industrial, Commercial, Institutional, or Agricultural.

Wholesale Customer	Water Use Category*	Annual Water Use	Treated or Raw
	Choose One	0	Choose One
	Choose One	0	Choose One
	Choose One	0	Choose One
	Choose One	0	Choose One
	Choose One	0	Choose One

*For definitions on recommended customer categories for classifying customer water use, refer to the online [Guidance and Methodology for Reporting on Water Conservation and Water Use](#).

F. Utility Data Comment Section

Provide additional comments about utility data below.

City of Groves Account Consumption Ranking

Section II: System Data

A. Retail Connections

1. List the active retail connections by major water use category.

Water Use Category*	Active Retail Connections			
	Metered	Unmetered	Total Connections	Percent of Total Connections
Residential – Single Family	6,173		6,173	94%
Residential – Multi-family (units)	0	0	0	0%
Industrial	0	0	0	0%
Commercial	388	6	394	6%
Institutional	0	0	0	0%
Agricultural	0	0	0	0%
TOTAL	6,561	6	6,567	

*For definitions on recommended customer categories for classifying customer water use, refer to the online [Guidance and Methodology for Reporting on Water Conservation and Water Use](#).

2. List the net number of new retail connections by water use category for the previous five years.

Water Use Category*	Net Number of New Retail Connections				
	2018	2017	2016	2015	2014
Residential – Single Family	50	22	16	19	11
Residential – Multi-family (units)					
Industrial					
Commercial					
Institutional					
Agricultural					
TOTAL	50	22	16	19	11

*For definitions on recommended customer categories for classifying customer water use, refer to the online [Guidance and Methodology for Reporting on Water Conservation and Water Use](#).

B. Accounting Data

For the previous five years, enter the number of gallons of RETAIL water provided in each major water use category.

Water Use Category*	Total Gallons of Retail Water				
	2018	2017	2016	2015	2014
Residential - Single Family	389,357,700	333,201,900	343,765,100	392,835,500	377,601,700
Residential – Multi-family	0	0	0	0	0
Industrial	0	0	0	0	0
Commercial	90,639,200	103,792,700	103,688,300	187,945,500	178,859,100
Institutional	0	0	0	0	0
Agricultural	0	0	0	0	0
TOTAL	479,996,900	436,994,600	447,453,400	580,781,000	556,460,800

*For definitions on recommended customer categories for classifying customer water use, refer to the online [Guidance and Methodology for Reporting on Water Conservation and Water Use](#).

C. Residential Water Use

For the previous five years, enter the residential GPCD for single family and multi-family units.

Water Use Category*	Residential GPCD				
	2018	2017	2016	2015	2014
Residential - Single Family	62	53	55	62	64
Residential – Multi-family					

D. Annual and Seasonal Water Use

1. For the previous five years, enter the gallons of treated water provided to RETAIL customers.

Month	Total Gallons of Treated Retail Water				
	2018	2017	2016	2015	2014
January	46,562,000	49,017,000	54,387,000	50,665,000	49,231,000
February	38,633,000	42,864,000	51,690,000	43,226,000	42,612,000
March	44,487,000	47,001,000	55,296,000	47,899,000	47,022,000
April	44,542,000	44,404,000	55,553,000	46,458,000	46,638,000
May	55,895,000	47,201,000	64,401,000	49,570,000	52,744,000
June	57,672,000	53,694,000	49,346,000	48,585,000	54,210,000
July	54,219,000	50,847,000	50,389,000	56,919,000	49,343,000
August	53,137,000	46,085,000	49,947,000	58,843,000	53,696,000
September	49,091,000	46,629,000	45,847,000	49,928,000	48,784,000
October	50,760,000	48,616,000	49,331,000	52,956,000	49,336,000
November	49,553,000	42,507,000	46,669,000	49,530,000	48,742,000
December	48,463,000	42,427,000	47,649,000	52,011,000	49,366,000
TOTAL	593,014,000	561,292,000	620,505,000	606,590,000	591,724,000

2. For the previous five years, enter the gallons of raw water provided to RETAIL customers.

Month	Total Gallons of Raw Retail Water				
	2018	2017	2016	2015	2014
January					
February					
March					
April					
May					
June					
July					
August					
September					
October					
November					
December					
TOTAL	0	0	0	0	0

3. Summary of seasonal and annual water use.

Water Use	Seasonal and Annual Water Use					Average in Gallons
	2018	2017	2016	2015	2014	
Summer Retail (Treated + Raw)	165,028,000	150,626,000	149,682,000	164,347,000	157,249,000	157,386,400 5yr Average
TOTAL Retail (Treated + Raw)	593,014,000	561,292,000	620,505,000	606,590,000	591,724,000	594,625,000 5yr Average

E. Water Loss

Provide Water Loss data for the previous five years.

$$\text{Water Loss GPCD} = [\text{Total Water Loss in Gallons} \div \text{Permanent Population Served}] \div 365$$

$$\text{Water Loss Percentage} = [\text{Total Water Loss} \div \text{Total System Input}] \times 100$$

Year	Total Water Loss in Gallons	Water Loss in GPCD	Water Loss as a Percentage
2018	35,933,967	6	6%
2017	45,858,443	7	8%
2016	106,154,987	17	15%
2015	121,175,894	19	17%
2014	142,568,725	24	20%
5-year average	90,338,403	15	13%

F. Peak Water Use

Provide the Average Daily Water Use and Peak Day Water Use for the previous five years.

Year	Average Daily Use (gal)	Peak Day Use (gal)	Ratio (peak/avg)
2018	1,624,695	1,793,782	1.10
2017	1,537,786	1,637,239	1.06
2016	1,700,013	1,626,978	0.96
2015	1,661,890	1,786,380	1.07
2014	1,621,161	1,709,228	1.05

G. Summary of Historic Water Use

Water Use Category	Historic 5-year Average	Percent of Connections	Percent of Water Use
Residential SF	367,352,380	94%	0%
Residential MF	0	0%	0%
Industrial	0	0%	0%
Commercial	132,984,960	6%	0%
Institutional	0	0%	0%
Agricultural	0	0%	0%

H. System Data Comment Section

Provide additional comments about system data below.

Commercial usage and multi family housing are combined in one category for the city's billing. The division between actual commercial usage and multifamily housing usage is estimated. The city of Groves is land locked community that has very little room for additional growth.

Section III: Wastewater System Data

If you do not provide wastewater system services then you have completed the Utility Profile. Save and Print this form to submit with your Plan. Continue with the Water Conservation Plan Checklist to complete your Water Conservation Plan.

A. Wastewater System Data (Attach a description of your wastewater system.)

1. Design capacity of wastewater treatment plant(s): 5,000,000 gallons per day.
2. List the active wastewater connections by major water use category.

Water Use Category*	Active Wastewater Connections			
	Metered	Unmetered	Total Connections	Percent of Total Connections
Municipal	6,561		6,561	94%
Industrial			0	0%
Commercial	388		388	6%
Institutional			0	0%
Agricultural			0	0%
TOTAL	6,949	0	6,949	

2. What percent of water is serviced by the wastewater system? 97%
3. For the previous five years, enter the number of gallons of wastewater that was treated by the utility.

Month	Total Gallons of Treated Wastewater				
	2018	2017	2016	2015	2014
January	128,650,000	118,822,000	102,076,000	121,854,000	52,233,000
February	107,863,000	63,406,000	82,909,000	51,217,000	80,847,000
March	71,279,000	90,782,000	63,490,000	94,797,000	71,326,000
April	53,434,000	61,401,000	109,179,000	145,804,000	45,420,000
May	41,427,000	84,756,000	127,719,000	98,883,000	40,976,000
June	98,979,000	150,068,000	137,468,000	82,732,000	53,182,000
July	132,452,000	110,147,000	56,053,000	52,908,000	97,910,000
August	69,717,000	167,132,000	136,434,000	64,487,000	56,040,000
September	184,080,000	56,406,000	51,338,000	68,270,000	51,415,000
October	118,465,000	53,881,000	53,153,000	67,676,000	45,066,000
November	127,233,000	52,003,000	57,767,000	106,702,000	70,162,000
December	116,174,000	921,520,000	110,925,000	78,064,000	74,077,000
TOTAL	1,249,753,000	1,930,324,000	1,088,511,000	1,033,394,000	738,654,000

4. Can treated wastewater be substituted for potable water?

- Yes No

B. Reuse Data

1. Provide data on the types of recycling and reuse activities implemented during the current reporting period.

Type of Reuse	Total Annual Volume (in gallons)
On-site irrigation	0
Plant wash down	0
Chlorination/de-chlorination	0
Industrial	0
Landscape irrigation (parks, golf courses)	0
Agricultural	0
Discharge to surface water	0
Evaporation pond	0
Other	0
TOTAL	0

C. Wastewater System Data Comment

Provide additional comments about wastewater system data below.

Waste water system MOR'S

You have completed the Utility Profile. Save and Print this form to submit with your Plan. Continue with the Water Conservation Plan Checklist to complete your Water Conservation Plan.

APPENDIX C

Water Conservation Plan 5- and 10- year goals (TWDB-1964)

WATER CONSERVATION PLAN 5- AND 10-YR GOALS FOR WATER SAVINGS

Facility Name: City of Groves

Water Conservation Plan Year: 2019

	Historic 5yr Average	Baseline	5-yr Goal for year <u>2024</u>	10-yr Goal for year <u>2029</u>
Total GPCD ¹	107	95	90	85
Residential GPCD ²	59	62	55	50
Water Loss (GPCD) ³	15	6	5	4
Water Loss (Percentage) ⁴	14%	6%	6%	6%

1. Total GPCD = (Total Gallons in System + Permanent Population) ÷ 365
2. Residential GPCD = (Gallons Used for Residential Use + Residential Population) ÷ 365
3. Water Loss GPCD = (Total Water Loss + Permanent Population) ÷ 365
4. Water Loss Percentage = (Total Water Loss ÷ Total Gallons in System) x 100; or (Water Loss GPCD ÷ Total GPCD) x 100